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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/668,499	09/23/2003	Michael B. North Morris	10021294-1	2289

7590 12/29/2005

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EXAMINER	
LYONS, MICHAEL A	

ART UNIT	PAPER NUMBER
2877	

DATE MAILED: 12/29/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/668,499	MORRIS, MICHAEL B. NORTH	
	Examiner	Art Unit	
	Michael A. Lyons	2877	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *07 October 2005*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,4,6,7,10,12-18 and 20-27* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *21-27* is/are allowed.

6)☒ Claim(s) *1,4,6,7,10,12-18 and 20* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *23 September 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1, 6-7, 12-13, 17-18, and 20 are rejected under 35 U.S.C. 102(e) as being clearly anticipated by Lee et al (6,885,462).

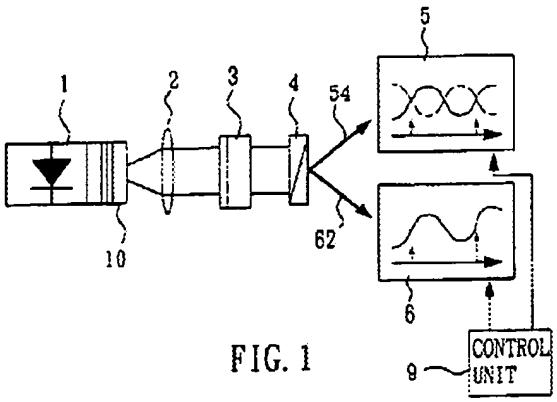


FIG. 1

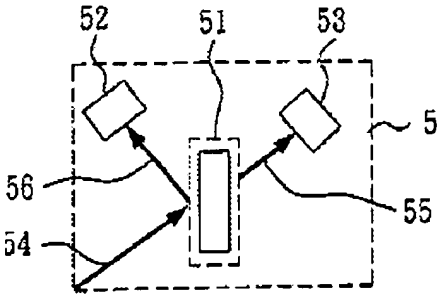


FIG. 2

Regarding claims 1, 7, and 17-18, Lee (Figs. 1 and 2) discloses a method and corresponding apparatus for monitoring a laser signal comprising an etalon 51 that receives an input signal from laser 1, a detector 53 for detecting light transmitted through the etalon, detector 52 that receives light reflected from the etalon, and a signal processor 9 that calculates a ratio from the detected light both transmitted through the etalon and reflected by the etalon, this ratio being the transmitted signal divided by the reflected signal, this ratio capable of being used to sharpen the peaks of the transmitted signal.

As for claims 6 and 12, the etalon 51 is a Fabry-Perot.

As for claims 13 and 20, Lee discloses the use of a second optical component 6 with corresponding detector 61 "having a segmented periodically monotonous, or monotonous, spectral characteristic . . . for recognizing a channel of a specific wavelength" as a reference device (Col. 3, lines 31-36).

Claim Rejections - 35 USC § 103

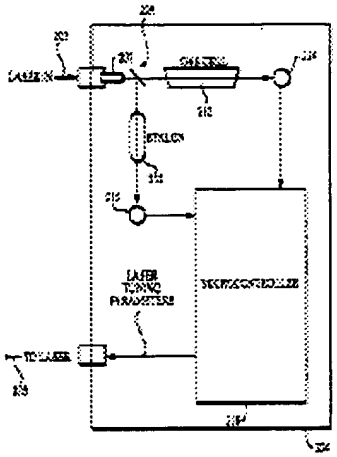
The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 4 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lee et al (6,885,462).

As for claims 4 and 10, while Lee fails to disclose the explicit equations claimed, Official Notice is taken as to the fact that the equation for measuring reflectance and transmission of an etalon is well known, and it would have been obvious to one of ordinary skill in the art at the time the invention was made to use such an equation when calculating the ratio of the reflected versus transmitted signal from the etalon, the motivation being that using the known equations will provide accurate, reliable results.

Claims 14-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lee et al (6,885,462) in view of May (6,714,309).



As for claim 14, Lee discloses the detection of the sample beam at detector 61 after passing through device 6 that serves as a reference. The optical device, however, is not a gas cell as claimed.

May, however, (Fig. 3) discloses a device where part of a laser input beam is passed through a gas cell 210 to detector 214 while the other part of the laser beam travels to etalon 212. The gas cell is used as a reference, as it "contains gas having a known absorption spectrum with numerous absorption lines" (Col. 8, lines 53-54).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to add a reference gas cell to the device of Lee as per May rather than the disclosed optical device of Lee, the motivation being that the gas cell will provide a known, more accurate reference signal for comparison with the detected reflected and transmitted signals from the etalon.

As for claims 15-16, Lee discloses the transmitted divided by reflected ratio as discussed above with regards to claims 1, 7, and 17-18.

Allowable Subject Matter

Claims 21-27 are allowed in view of the prior art.

The following is a statement of reasons for the indication of allowable subject matter:

As to claims 21 and 23, the prior art of record, taken either alone or in combination, fails to disclose or render obvious a method and system for monitoring a laser signal, this method and system comprising the production of a transmitted signal of light passing through an etalon by a first detector, the production of a reflected signal of light reflecting off of the etalon by a second detector, and a monitor generating a sinusoidal signal for use in interpolation, the signal being generated by dividing the reflected signal by the transmitted signal, in combination with the rest of the limitations of the above claims.

With further regard to the above claims, please see the applicant's arguments, dated October 7, 2005, in response to the previous Office Action of record.

Response to Arguments

Applicant's arguments filed October 7, 2005 have been fully considered but they are not persuasive with regards to the claims that remain rejected above. The applicant's arguments center around the transmitted divided by reflected ratio in both the instant claims and in the Lee disclosure. Applicant states that, while Lee discloses a ratio of dividing the transmitted signal by the reflected signal, Lee fails to disclose the sharpening of peaks of the transmitted signal through the use of the ratio. As discloses by Lee, the ratio is used to detect wavelength drift.

While the examiner agrees with the applicant on this matter, the statement, by itself, is not persuasive. Lee's device and method clearly discloses the use of a ratio employing the division of the transmitted signal by the reflected signal. Furthermore, while the intended result

of the instant claims is not explicitly disclosed by Lee, the ratio of Lee, being identical in form to that of the instant claims, is easily capable of providing additional information as to the transmitted signal without undue, non-obvious experimentation.

In conclusion, the applicant has failed to specifically point out how the language of the claims patentable distinguishes them from the Lee reference; 37 CFR 1.111 (b) states, "A general allegation that the claims define a patentable invention with out specifically pointing out how the language of the claims patentable distinguishes them from the references does not comply with the requirements of this section". Further, it has been held that a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations. *Ex parte Masham*, 2 USPQ 2d 1647 (1987). Therefore, the arguments are not persuasive, and claims 1, 4, 6-7, 10, 12-18, and 20 remain rejected as discussed above.

With regards to the taking of Official Notice, the applicant has not presented a traversal of the Official Notice, thus the well-known statement is taken to be admitted prior art. See MPEP 2144.03, paragraphs 4 and 6.

Applicant's arguments with regards to claims 21-27, however, are persuasive, with the indication of allowable subject matter as discussed above.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO

MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael A. Lyons whose telephone number is 571-272-2420. The examiner can normally be reached on Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gregory J. Toatley can be reached on 571-272-2800 ext. 77. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

MAL
December 21, 2005

Gregory J. Toatley, Jr.
Supervisory Patent Examiner